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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/758,566	01/12/2001	Kyeong Jin Kim	8733.355.00	9099

30827 7590 02/27/2003  
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EXAMINER

SCHECHTER, ANDREW M

ART UNIT PAPER NUMBER

2871

DATE MAILED: 02/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/758,566

Applicant(s)

KIM ET AL.

Examiner

Andrew Schechter

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-22 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5,7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 4 is objected to because of the following informalities: it appears that it should depend on claim 3, rather than on claim 2 (analogous to claim 15 depending on claim 14). Appropriate correction is required, if this is the intent of the applicant.
2. Claim 1 is objected to because of the following informalities: "on the first substrates" should be "on the first substrate". Also, claim 1 recites the limitation "at least one or more dielectric structures on the common electrode" in line 9. There is insufficient antecedent basis for this limitation in the claim. Some limitation such as "a common electrode on the second substrate" is necessary. Appropriate correction is required.
3. Claim 12 is objected to because of the following informalities: "on the first to define" should be "on the first substrate to define". Appropriate correction is required.
4. Claim 8 is objected to because of the following informalities: "electric field windows" should be "electric field induction windows". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

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(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or  
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

6. Claims 1, 2, 5-13, and 16-22 are rejected under 35 U.S.C. 102(e) as being anticipated by *Kim et al.*, U.S. Patent No. 6,462,798.

*Kim '798* discloses [see Fig. 3 for instance] a liquid crystal display comprising substrates [31, 33] and liquid crystal between them, gate and data lines [1, 3] defining pixel regions, a common auxiliary electrode [15] surrounding the pixel region, a pixel electrode [13] with an electric field induction window [51], and a dielectric structure [53] on the common electrode [17]. Claim 1 is therefore anticipated.

*Kim '798* also discloses the dielectric structure [53] being on the pixel electrode [col. 11, lines 33-34], so claim 12 is also anticipated.

The common auxiliary electrode is on a layer equal to the gate lines, so claims 2, and 13 are also anticipated. Each of the pixel regions is divided into one or more sections to form a multi-domain pixel, with different driving characteristics, so claims 5, 6, 16, and 17 are also anticipated. The common auxiliary electrode can be formed in the electric field induction windows [see Figs. 6, 10], so claims 7 and 18 are also anticipated. The electric field induction windows include slits, so claims 8 and 19 are also anticipated. The common auxiliary electrode partially overlaps the pixel electrode [see Fig. 5], so claims 9 and 20 are also anticipated. There is an alignment film [col. 7,

lines 39-40], so claims 10 and 21 are also anticipated. There is a phase difference film [29], so claims 11 and 22 are also anticipated.

7. Claims 1, 3, 5, 6, 8, 10-12, 14-17, 19, 21, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by *Kim et al.*, U.S. Patent No. 6,356,335.

*Kim '335* discloses a liquid crystal display comprising substrates [31, 33] and liquid crystal between them, gate and data lines defining pixel regions, a common auxiliary electrode [27] surrounding the pixel region [col. 4, lines 59-61], a pixel electrode [13] with an electric field induction window [43], and a dielectric structure [57] on the common electrode [17] or the pixel electrode. Claims 1 and 12 are therefore anticipated.

The dielectric structures can extend from the second substrate to the first substrate and act as spacers, so claims 3, 14, and 15 are also anticipated. Each of the pixel regions is divided into one or more sections to form a multi-domain pixel, with different driving characteristics, so claims 5, 6, 16, and 17 are also anticipated. The electric field induction windows include slits, so claims 8 and 19 are also anticipated. There is an alignment film [53, 55], so claims 10 and 21 are also anticipated. There is a phase difference film [29], so claims 11 and 22 are also anticipated.

#### ***Allowable Subject Matter***

8. Claim 4 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims, and to overcome the objection to claim 1 set forth in this Office action.

9. The following is a statement of reasons for the indication of allowable subject matter:

The prior art (notably *Kim* '335 and *Kim* '798) does not disclose an LCD with pixel electrode having electric field induction window, dielectric structure on the common electrode acting as a spacer between the substrates, and a common auxiliary electrode surrounding the pixel region and on a layer equal to the gate lines, as recited by the present claim 4. Note that if claim 4 was amended to depend on claim 3 rather than on claim 2 (as suggested under *Claim Objections*), it would not include the limitation of claim 2 and would be anticipated by *Kim* '335.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,384,889 to *Miyachi et al.* discloses [see Fig. 21B,D] an LCD with pixel electrode having electric field induction windows and dielectric structures on the pixel and common electrodes (acting as a spacer), but its common auxiliary electrode does not surround the pixel region. Given the relationship in *Miyachi* between the spacer location and the common auxiliary electrode, it would not be obvious to modify the common auxiliary electrode to surround the pixel region as opposed to using it in its present position.


U.S. Patent No. 5,339,181 to *Kim et al.* discloses a common auxiliary electrode surrounding a pixel region.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Schechter whose telephone number is (703) 306-5801. The examiner can normally be reached on Monday - Friday, 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on (703) 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-4711 for regular communications and (703) 746-4711 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

  
Andrew Schechter  
February 21, 2003

  
ROBERT H. KIM  
SUPERVISOR, EXAMINER  
TECHNICAL